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indefinite lengths of slender, tubular, perhaps noded, stem to which the rosette and fruits were attached. If the broken enlargement at the end of one of these stems was a root or holdfast, the stem could not have been more than 8 cm long, but complete specimens must be had to confirm this point. At any rate these additional facts affirm the inference that T.? microphylla was a hydrophyte with morphology and habits comparable to those of Trapa natans today.

ORNITHOLOGY.—A genus and three new forms of birds from Borneo.¹ J. H. RILEY, U. S. National Museum. (Communicated by H. Friedmann.)

In identifying material collected by Doctor W. L. Abbott and H. C. Raven in Borneo, the following genus and three forms of birds are believed to be unnamed. They may be known from the following descriptions:

Elocincla aenigma gen. et sp. nov.

Type.—Adult male, U. S. National Museum, No. 181562, Klumpang Bay, Southeast Borneo, March 5, 1908. Collected by Dr. W. L. Abbott. Similar to Malacocincla Blyth, but tail shorter than the tarsus, instead of much longer.

The type and only species may be described as follows:

Similar to Malacocincla rufiventris Salvadori, but bill and tail shorter.

Description.—Pileum deep neutral gray washed with olive brown; back and outward surface of the wings cinnamon brown, becoming slightly more reddish on the upper tail-coverts; tail mars brown; lores and cheeks deep mouse gray, the auriculars washed lightly with olive brown; throat and jugulum white, the latter with obsolete dusky streaks; chest, sides, belly, and crissum cinnamon; middle of the breast buffy white. Wing, 71; tail, 25.5; culmen, 16; tarsus, 27; middle toe and claw, 22.

Remarks.—The present species is founded upon four specimens, as follows: the type; one male and one female, Kapuas River, West Borneo; and one female, Ritan River, East Borneo. There is some little variation in the four

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Fig. 1.—*Trapa? microphylla* Lesquereux with two fruits, one of which is attached beneath the center of the rosette of floating surface leaves. Ravenscrag formation (Eocene), sec. 4, T. 2, R. 22 west of the 2nd meridian, Saskatchewan, Canada. Collected by Edgar Houldsworth. Fig. 2.—Specimen showing one misshapen attached fruit. Ravenscrag formation. Fig. 3.—Specimen showing fimbriated submerged leaves beneath the rosette of surface leaves. Meeteetse formation (Cretaceous), SE $\frac{1}{4}$ sec. 10, T. 46 N., R. 98 W., Wyo. Collected by D. F. Hewett. Figs. 4-6, 8.—Detached fruits. Fort Union formation (Eocene), left bank of the Yellowstone River at Burns Ranch, 30 miles northeast of Glendive, Mont. Collected by Lester F. Ward. Fig. 7.—Sketch of leaflet showing venation. After Lesquereux, *The Tertiary flora*, U. S. Geol. Survey of Terr., vol. 7, pl. 61, fig. 16, 1887. Fig. 9.—Small rosette. Meeteetse formation, NE $\frac{1}{4}$ sec. 2, T. 45 N., R. 98 W., Wyo. Collected by D. F. Hewett. All figured specimens are in the U. S. National Museum.

specimens. In one female there is little white on the breast and the dusky streaks extend forward onto the throat. In two of the specimens the pileum is deep neutral gray without any olive brown wash. The four birds have been compared with five skins of *Malacocincla rufiventris* from Dutch East Borneo and they are remarkably alike in plumage. The latter on the average is a more reddish brown above and the pileum is more heavily washed with brown, sometimes entirely brown. It is remarkable how close the two species resemble each other in plumage and for this reason *Elocincla aenigma* has been overlooked, but the latter can always be distinguished by its shorter tail and bill; it is also somewhat smaller.

The four specimens of *Elocincla aenigma* measure: wing, 66.5-75 (70); tail, 23-25.5 (24.7); culmen, 15-16 (15.5).

The five specimens of *Malacocincla rufiventris* measure: wing, 71.5-75 (73.9); tail, 40-46.5 (43.3); culmen, 17-18 (17.2).

In my opinion *Malacocincla sepiaria* and *Malacocincla rufiventris* belong to two distinct form groups.

Ptilopyga Sharpe² (type Malacocincla rufiventris Salvadori) is a synonym of Malacocincla Blyth.

Iole olivacea perplexa subsp. nov.

Type.—Female, U. S. National Museum, No. 182491, Labuan Klambu, East Borneo, June 28, 1913, collected by H. C. Raven (original No. 909).

Similar to *Iole olivacea charlottae* Finsch, but smaller, the tail a more reddish brown above, the greater wing-coverts and inner remiges edged outwardly with hazel instead of light brownish olive; under tail-coverts ochraceous-tawny rather than ochraceous-buff or colonial-buff. Wing, 78; tail, 72; culmen, 16.

Remarks.—Raven took two females at the type locality on the same day. It may be the hazel edging to the wing-coverts and inner remiges denotes that the specimens are not fully adult, but they are about full grown and it seems hardly likely that there would be any great increment in size. The other female measures: wing, 78; tail, 73; culmen, 16.

Two males of *Iole olivacea charlottae* measure: wing, 88–91; tail, 72–73; culmen, 18–20.5; two females: wing, 82.5–90; tail, 72.5–74; culmen, 18.5–19.

Arachnothera affinis pars subsp. nov.

Type.—Adult male, U. S. National Museum, No. 182150, Birang River, Dutch East Borneo, October 9, 1912. Collected by H. C. Raven (original No. 276).

Similar to Arachnothera affinis modesta of the Malay Peninsula, but the lower parts lighter and less greenish yellow; the throat and breast more heavily streaked with dusky; above there is not much difference between the two forms; the Bornean race is on the average more greenish, less yellow-ish on the upper parts; wing, 89; tail, 55; culmen, 40.

Remarks.—The above race is founded upon three males and two females from Dutch East Borneo. These have been compared with a large series from the Malay Peninsula and Sumatra and they stand right out as described above. A single male of *Arachnothera affinis everetti* from Mount Kina Balu has been examined and *A. affinis pars* resembles it in color but is not so dark below or so greenish above; in size the Kina Balu specimen is somewhat larger; it measures: wing, 95; tail, 61; culmen, 42.5. Seven males

² Cat. Birds Brit. Mus. 7: 507. 585. 1883.

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and seven females from the Malay Peninsula (the type locality of modesta is Malacca) measure: wing, 70-86 (78.2); tail, 39.5-52 (45.5); culmen, 33-40 (35.7). Three males and two females from East Borneo measure: wing, 76-89.5 (82.4); tail, 44.5-57 (49.6); culmen, 35-40 (37.3). Sumatran specimens are slightly more yellowish green above than Malay Peninsula birds and appear to be a little smaller. Three males and three females from Sumatra measure: wing, 72-83 (77.7); tail, 39-50 (44); culmen, 31-35 (32.8).

Arachnothera affinis affinis of Java is much more yellowish above than the Bornean series and below is darker, more grayish; it is rather heavily streaked below like the Bornean form, however. Two males and one female from Java measure: wing, 78–91 (84); tail, 47–59 (52.2); culmen, 33.5–36 (34.5).

Whether Arachnothera affinis pars is confined to Dutch East Borneo or not is not known at present, but it seems incredible that such a well-marked form should have escaped naming so long, if it was more generally distributed upon the island.

ZOOLOGY.—Crabs as food in India.¹ A. RAMAKRISHNA REDDY, Annamalai University, S. India. (Communicated by WALDO L. SCHMITT.)

Crabs are used extensively for food in India, particularly in all provinces that border on the sea. In Bengal the crabs fished are *Scylla serrata* (Forskål), *Neptunus pelagicus* (Linn.), and *Charybdis crucifera* (Fabr.). *Scylla* is the most important and is very much relished by the Bengalese. The other two only occasionally are brought to market. In Bengal the freshwater *Parathelphusa spinigera* (Wood-Mason) and the esturine *Varuna litterata* (Fabr.) are taken for domestic use by the poorer classes.

Along the coast of Bombay and Sind, S. serrata, Neptunus sanguinolentus (Herbst), and C. crucifera are most frequently caught. The Parathelphusa fished in this region is P. jacquimontii (Rathbun).

In Madras, N. pelagicus, N. sanguinolentus, S. serrata, Matuta victor (Fabr.), and C. crucifera, listed in the order of their importance, form a large scale fishery. Here the freshwater species consumed locally are Parathelphusa hydrodromus (Herbst) and P. bouvieri (Rathbun).

Scylla reaches a large size, 8 to 12 inches in width. In Chilka Lake it may attain a width of a foot and a half! Charybdis also grows to a large size, but Neptunus not over 8 inches in width. Parathelphusa ranges from 2 to 5 inches, while Varuna never exceeds 2. Matuta grows slightly larger than Varuna.

¹ Prepared in response to an inquiry from Dr. Waldo L. Schmitt, of the United States National Museum. I am indebted to Dr. B. N. Chopra, of the Indian Zoological Survey, Calcutta, for assistance in the preparation of this article and also to the Director of Fisheries, Government of Madras, the Director of Industries, Government of Bombay, and the Fisheries Expert with the Government of Bengal. Received December 22, 1938.